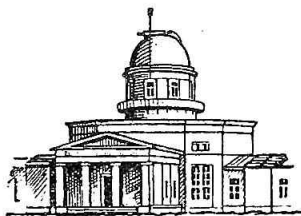


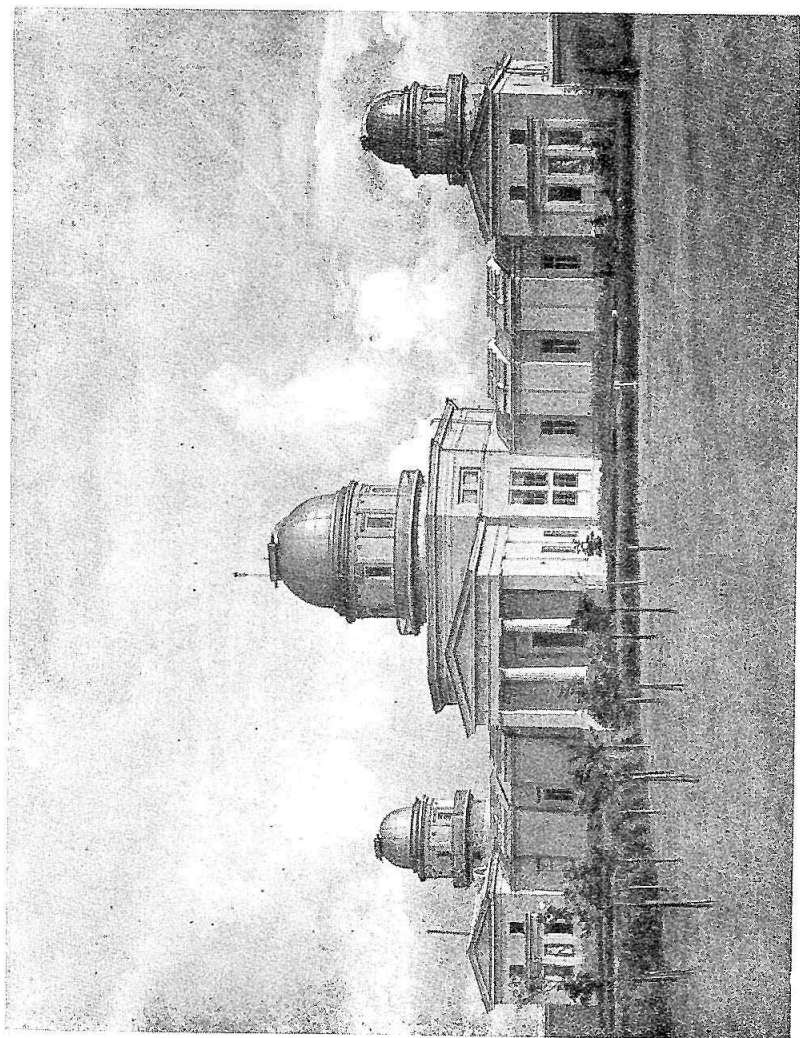
ACADEMY OF SCIENCES OF THE USSR

A. N. D A D A E V

THE PULKOVO  
OBSERVATORY



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CENTRAL ASTRONOMICAL OBSERVATORY

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## THE HISTORY OF THE OBSERVATORY

The Pulkovo Observatory was founded by an outstanding astronomer of the nineteenth century, F. W. Struve (1793—1864). It was built according to the design of the well-known Russian architect, A. P. Brüllow (1798—1877). The official ceremonious inauguration of the observatory took place on August 19 (7), 1839.

The founding of a first-class astronomical observatory of the Academy of Sciences was dictated by the practical needs for a geographical study of the vast territory of the Russian Empire, which was then on the way to capitalistic development. The newly built observatory was equipped with the most perfect instruments of those days, these being ordered by F. W. Struve in foreign countries.

The main task of the observatory was the determination of the exact coordinates of celestial bodies in order to compile star catalogues. This problem was solved by the absolute and differential methods of observation. More precise values of astronomical constants were also derived from the data thus obtained.

In order to determine the absolute coordinates of stars, independently of any other previous measurements, F. W. Struve proposed that the right ascensions and declinations of the stars be observed separately. For this purpose

a large transit instrument (the diameter of the object-glass  $D=150$  mm,  $f=260$  cm) and a vertical circle ( $D=150$  mm,  $f=195$  cm), made by Ertel in Munich, were installed. The differential observations were made with a Repsold meridian circle ( $D=150$  mm,  $f=215$  cm). The constants of aberration and nutation were determined with a Repsold transit instrument ( $D=155$  mm,  $f=235$  cm) in the prime vertical. The method of determining the astronomical constants was elaborated by F. W. Struve, who made these observations himself. A 15-inch refractor, the largest in the world at that time, was installed for measurements of double stars. This instrument was made by Fraunhofer's successors — the German opticians Merz and Mahler.

F. W. Struve not only determined the aims and problems of the observatory but also the whole organization of its work, this being fixed by the Statute of the Central Astronomical Observatory.

At first the scientific staff of the observatory consisted of the director (the first astronomer), F. W. Struve, and his four assistants: O. W. Struve, G. Sabler, G. Fuss and C. A. F. Peters. By a skillful use of the first-class equipment and a constant perfection of the methods of observations they pioneered new paths in observational astronomy and founded the Pulkovo astrometrical school where the «art of observation» was combined with the «science of observation».

Executing the main task of the observatory the generations of Pulkovo astrometrists compiled absolute catalogues of right ascensions and declinations of stars for the epochs 1845, 1865, 1885, 1905, and 1930, which included from 374 to 558 bright stars. With the publication of the catalogues of 1845 and 1865, it became possible to compile on their basis fundamental catalogues of star positions, using also the observations of other observatories. Such